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D E C I S I O N
of 6 July 2006

Case Number: W 0007/06 - 3.3.03

Application Number: PCT/US 2005/017794

Publication Number: WO 2006/007154 A2

IPC: C08L 53/02, C08F 297/04

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Title of invention:
Elasomeric monoalkenyl arene-conjugated diene block copolymers

Applicant:
Dow Global Technologies Inc.

Opponent:
-

Headword:
-

Relevant legal provisions:
PCT Art. 17(3)a
PCT R. 13.1, 13.2, 40.1, 40.2(c), 43(bis)1

Keyword:
"Lack of unity a priori (no)"
"Lack of unity a posteriori (no)"

Decisions cited:
G 0001/89, W 0026/91

Catchword:
-

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Case Number: W 0007/06 - 3.3.03

International Application No. PCT/US 2005/017794

D E C I S I O N
of the Technical Board of Appeal 3.3.03
of 6 July 2006

Applicant: Dow Global Technologies Inc.
Washington Street, 1790 Building
Midland, MI 48674 (US)

Representative: Howard, Dan R.
The Dow Chemical Company,
Intellectual Property
P.O. Box 1967
Midland, MI 48641-1967 (US)

Decision under appeal: **Protest according to Rule 40.2(c) of the Patent Cooperation Treaty made by the applicants against the invitation (payment of additional fees) of the European Patent Office (International Searching Authority) dated 22 August 2005.**

Composition of the Board:

Chairman: R. Young
Members: C. Idez
T. Bokor

Summary of Facts and Submissions

I. International application PCT/US2005/017794 entitled "Elastomeric monoalkenyl arene-conjugated diene block copolymers" comprising 26 claims was filed on 19 May 2005.

II. Independent Claims 1 and 25 of the application as filed read as follows:

"1. A block copolymer containing alternating blocks of polymerized monoalkenyl arene and polymerized isoprene, the block copolymer having at least two polymerized monoalkenyl arene blocks, a melt flow rate, as determined by ASTM D 1238 (200°C, 5 kilogram weight), of at more than 40 decigrams per minute, a minimum capillary spinning temperature that is less than or equal to its degradation temperature that exceeds its spin bonding temperature by at least one degree centigrade, and a viscosity at the minimum capillary spinning temperature of no more than 1500 poise (150 pascal seconds).

25. A polymer blend composition comprising the block copolymer of any one of Claims 1-24 in combination with a polymer selected from the group consisting of polyolefins (for example)) [sic], polystyrene, thermoplastic polyurethanes, polycarbonates, polyamides, polyethers, poly/vinyl chloride polymers, poly/vinylidene chloride polymers, and polyester polymers."

Claims 2 to 24, and 26 were dependent claims.

III. On 22 August 2005 the European Patent Office (EPO), acting as International Searching Authority (ISA), in compliance with Article 17(3)a) PCT and Rule 40.1 PCT issued an "Invitation to pay Additional Fees" (hereinafter "Invitation") stating that the application contravened the requirements of unity of invention according to Rule 13 PCT and inviting the Applicant to pay, within a time limit of 1 month, 2 additional search fees.

IV. According to the Invitation, there was a a priori lack of unity since Claims 1—3 related to a specific block copolymer having the defined triblock structure of styrene—isoprene—styrene, while Claim 9 related to further distinct and different specific pentablock copolymer structures, and while Claim 23 related to several other distinct and different tetrablock and hexablock copolymer structures.

According to the invitation, there was also a a posteriori lack of unity, since the "corresponding technical features" of a block copolymer containing alternating blocks of polymerised monoalkenyl arene and polymerised isoprene and having at least 2 polymerised monoalkenyl arene blocks as described in Claim 1 were not considered "to be novel and inventive in view of the disclosures of documents W0-A-2004/104095, US-A-4 732 928, W0-A-02/22733, W0-A-00/20207, US-A-4 663 220 etc. (see search report)" [sic]. Thus, according to the invitation, the application did not contain any "special" technical features within the meaning of Rule 13.2 PCT. technical features that define a contribution over the prior art, and, and it

hence did not meet the requirements of Rule 13.1 PCT for lack of unity.

Consequently, the ISA found the following groups of inventions in the international application:

Group 1: The subject-matter of Claims 1–8, of Claims 12–14 (in part), of Claims 15-16, of Claims 19–21 (in part), and of Claims 25–26 (in part), which referred to a block copolymer containing alternating blocks of polymerised monoalkenyl arene and polymerised isoprene, the block copolymer having at least 2 polymerised monoalkenyl arene blocks, having a melt flow rate more than 40 g/10 min as described in Claim 1;

Group 2: The subject-matter of Claims 9–11, of Claims 12–14 (in part), of Claims 17, 18 and 22, of Claims 25–26 (in part) which referred to a further distinct and different block copolymer wherein the block copolymer was defined as a styrene–isoprene–styrene–isoprene–styrene pentablock copolymer as described in Claim 9; and

Group 3: The subject-matter of Claims 23–24, and of Claims 25–26 (in part), which referred to a further distinct and different block copolymer wherein the block copolymer was selected from the group consisting of styrene–isoprene–styrene–isoprene tetrablock copolymers, or the styrene–isoprene–styrene–isoprene–styrene–isoprene hexablock copolymers as described in Claim 23.

V. On 16 September 2005 the Applicant paid under protest the two additional search fees and simultaneously requested reimbursement of these fees.

In its letter dated 14 September 2005 announcing the afore-mentioned payment the Applicant argued essentially as follows:

(i) Claim 1 provided the necessary linking feature among the pending Claims.

(ii) Claim 1 broadly referred to a "block copolymer containing alternating blocks of polymerized monoalkenyl arene and polymerized isoprene" and required "at least two polymerized monoalkenyl arene blocks".

(iii) Thus, Claim 1 included triblock copolymers as in Claim 3, pentablock copolymers as in Claim 9 and tetrablock copolymers, hexablock copolymers, heptablock copolymers and higher alternating block copolymers as in Claim 23. In Claim 24, an upper limit on the number of alternating blocks at twelve (7 styrene blocks and 5 isoprene blocks) was indicated.

VI. On 6 February 2006 the Review Panel of EPO/ISA issued a "Notification regarding Review of Justification for Invitation to pay Additional Search Fees" (hereinafter "Review Notification"), in which the Applicant was invited to pay a protest fee within a time limit of one month.

In paragraph 1 of the "Review Notification", the Applicant was told that after review of the protest the two additional search fees should not be reimbursed.

The position of the Review Panel (cf. paragraph 2 of the Review Notification) can be summarized as follows:

(i) The Applicant has submitted that the necessary linking feature is Claim 1 which broadly claimed a block copolymer.

(ii) The Applicant has however failed in his letter to define any special technical features or single overall concept in the application.

(iii) It was immediately clear to the man skilled in the art that the present application relates to several different and distinct specific products as addressed and detailed in the original invitation to pay additional fees sent to the applicant, dated 22.08.2005.

VII. On 3 March 2006 the Applicant paid the protest fee requested in the "Review Notification".

VIII. The Applicant requested the reimbursement of the two additional search fees and of the protest fee which had been paid.

Reasons for the Decision

1. *Admissibility of the protest*

1.1 In the "Invitation" the ISA has considered that the application failed to comply both *a priori* and *a posteriori* with the requirements of unity of invention as set forth in Rule 13.1 PCT.

1.2 According to Rule 40.2(c) PCT, applicants "may pay the additional fee under protest, that is, accompanied by a reasoned statement to the effect that the international application complies with the requirement of unity of invention or that the amount of the required additional fee is excessive". It follows from Rule 40.2(c) PCT however that applicants paying the additional fees under protest must give grounds in support of that protest. This implies that the "reasoned statement" required by Rule 40.2(c) PCT necessitates a substantive argumentation aimed at showing the existence of the single general inventive concept, which, in the applicants' view, links all the different inventions within the meaning of Rule 13.1 and 13.2 PCT.

1.3 In this connection, the Board firstly notes that the Applicant in its letter dated 16 September 2005 relied only on the argument that Claim 1 provided the necessary linking feature among the pending claims, since it referred to a "block copolymer containing alternating blocks of polymerized monoalkenyl arene and polymerized isoprene" and required "at least two polymerized monoalkenyl arene blocks", and that it included the copolymers of Claims 3, 9, 23 and 24.

1.4 Although, in the Board's view, this statement can be regarded as an argument only dealing with the *a priori* objection of lack of unity raised by the ISA in the "Invitation", it can nevertheless be regarded as a reasoned statement within the meaning of Rule 40.2.(c) PCT, because it gives reasons showing why the applicant takes the view, that the requirements of unity of invention are met.

1.5 Thus, the protest is admissible.

2. *Lack of unity of invention a priori*

2.1 As can be deduced from the "Invitation", the *a priori* lack of unity objection raised by the ISA was based on the finding that the block copolymers according to Claim 1, the block copolymers according to Claim 9, and the block copolymers according to Claim 23 represented distinct block copolymers having different structures.

2.2 In this context, the Board firstly observes that Claims 9 and 23 are claims which are directly or indirectly dependent on Claim 1.

2.3 The Board further notes that the block copolymers according to Claim 1 are characterized as having:

(i) alternating blocks of polymerized monoalkenyl arene and polymerized isoprene;
(ii) **at least two** polymerized monoalkenyl arene blocks (emphasis by the Board)
(iii) a melt flow rate, as determined by ASTM D 1238 (200°C, 5 kilogram weight), of at more than 40 decigrams per minute,

(iv) a minimum capillary spinning temperature that is less than or equal to its degradation temperature that exceeds its spin bonding temperature by at least one degree centigrade; and
(v) a viscosity at the minimum capillary spinning temperature of no more than 1500 poise (150 pascal seconds).

2.4 The fact that the claimed block copolymers according to Claim 1 encompass block copolymers having more than 2 arene blocks is unambiguously confirmed by the description of the present application (cf. page 4, lines 12 to 17; page 7, lines 21 to 24).

2.5 Thus, it is immediately evident that the block copolymers according to Claim 23 which is dependent on Claim 1 represent further elaborations of block copolymers according to Claim 1 in respect of the number of alternating blocks (feature (i), above) and of the number of monoalkenyl arene blocks (feature (ii) above).

2.6 While at first glance the wording of Claim 9 might give the impression that it relates to the "**block copolymer of Claim 3**", it is however evident that Claim 9 cannot as such be dependent on Claim 3, since Claim 3 relates to styrene-isoprene-styrene **triblock** copolymer with a styrene content from **10 to 40 percent by weight** based on the block copolymer (emphases by the Board) while Claim 9 deals with block copolymer being a styrene-isoprene-styrene-isoprene-styrene **pentablock** (SISIS) copolymer that has a styrene content within a range of from **10 to 50 percent by weight**, based on the block copolymer weight".

2.7 This conclusion is also supported by the description of the present application (cf. page 4, lines 12 to 17; page 7, lines 21 to 24; page 8, lines 17 to 19, lines 25 to 28) which clearly shows that SISIS pentablock copolymers with a styrene content of 10 to 50% by weight indeed represent a further elaboration of the copolymers according to according Claim 1 in terms of number of alternating blocks (feature (i), above) and of the number of monoalkenyl arene blocks (feature (ii) above.

2.8 Thus, in view of the above, the Board can only come to the conclusion that the additional features in Claim 9 and 23 which have been added to the common subject-matter of Claim 1 do not change the technical character of the block copolymers of Claims 9 and 23, in such a way that on the face of it an a priori lack of unity could be recognised, and that the block copolymers according Claims 9 and 23 are indisputably encompassed by the general definition of the block copolymers according to Claim 1.

2.9 Consequently, the invitation to pay two additional search fees because an *a priori* lack of unity was not justified.

3. *Lack of unity a posteriori*

3.1 As can be deduced from the description of the present application, its aim is to provide elastomeric monoalkenyl arene conjugated diene block copolymers which could transformed into fibers by way of spun bond

techniques, melt spinning process or a combination of such techniques.

3.2 This problem is solved, according to the application, by providing a block copolymer having the features set out in Claim 1 of the present application, i.e. features (i), (ii), (iii), (iv) and (v) as referred above in paragraph 2.3.

3.3 Since, as indicated above in Section II, the present application comprises 2 independent claims, the claims should be grouped, in the Board's view, in the following manner:

Group I: Claims 1 to 24, which refer to block copolymers according to Claim 1; and

Group II: Claims 25 to 26, which refer to a composition comprising a block copolymer according to Claim 1.

3.4 It is, in the Board's view, evident that the subject-matter of Group I is conceptually linked to that of Group II by the block copolymer according to Claim 1. Thus, this block copolymer would qualify as common unifying "special technical feature" within the meaning of Rule 13.2. PCT, provided this common concept is novel and has an inventive character.

3.5 In that respect, the Board, however, notes that in the "Invitation" of the ISA (Section VI above) the block copolymers according to of Claim 1 were not considered "to be novel and inventive in view of the disclosures of documents W0-A-2004/104095, US-A-4 732 928,

W0-A-02/22733, W0-A-00/20207, US-A-4 663 220 e**tc.** (**see search report**)" [sic] (emphasis by the Board).

3.6 Although it is questionable as to whether what is stated by the ISA in its "Invitation" in respect of novelty and inventive step of the subject-matter of Claim 1 can be regarded as a meeting the requirements of Rule 40.1 PCT (cf. decision W 0026/91 of 8 September 1992 (not published in OJ EPO, Reasons 3.1 to 3.3)), the Board, in view of the absence of a detailed argumentation concerning the conclusion of lack of novelty and inventive step in the "Invitation" and of the reference made by the ISA to the search report in the "Invitation", deems it appropriate in the present case to consult the Written Opinion of the International Searching Authority (WO-ISA) which according to Rule 43(bis).1 PCT is issued at the same time as the International Search Report and which should contain an elaborated assessment of novelty and inventive step of the claimed subject-matter in view of the documents cited in the search report.

3.7 In this connection, the Board observes that, in the WO-ISA, the ISA has stated that the subject-matter of Claim 1 of the application in suit lacked novelty in view only of documents WO-A-2004/104095 (referred to as D1), US-A-20022132922 (D2), US-A-4 732 928 (D3), W0-A-02/22733 (D4), W0-A-00/20207 (D5) and WO-A-02/00806 (D6) "in consideration of the Guidelines C III 4.7a. for the physical measurement of minimum temperature parameters etc" [sic].

3.8 Independently of the fact that reference is made in the WO-ISA to a document not cited in the search report

(i.e. WO-A-02/00806) and that a document cited as novelty destroying in the search report (i.e. US-A-4 663 220) is no longer considered in the WO-ISA in respect to novelty, the Board can only state that the objection of lack of novelty against Claim 1 of the application in suit was made under consideration of Paragraph C III 4.7a. of the Guidelines, and that no assessment of inventive step has been carried out in the WO-ISA.

3.9 As stated in the decision G 1/89 (OJ EPO 1991, 155) "the consideration by an ISA of the requirement of unity of invention should, of course, always be made with a view to giving the applicant fair treatment and that the charging of additional fees under Article 17(3)(a) PCT should be made only in **clear cases** (emphasis by the Board). In particular, in view of the fact that such consideration under the PCT is being made without the applicant having had an opportunity to comment, the ISA should exercise restraint in the assessment of novelty and inventive step and in border-line cases preferably refrain from considering an application as not complying with the requirement of unity of invention on the ground of lack of novelty or inventive step."

3.10 Paragraph C III 4.7a of the Guidelines, which deals with the clarity of the definition of a product by parameters in a claim, indicates that cases in which parameters are employed should be closely examined, as they **might** disguise novelty (emphasis by the Board). In that respect this paragraph further refers to paragraph C IV.7.5 of the Guidelines, which deals with assessment of novelty in the case where the claims define the

invention or a feature thereof by parameters and which mentions the opportunity for the Applicant to show, e.g. by appropriate comparison tests, that differences do exist with a prior document art with respect to the parameters.

3.11 In the present case, it is hence evident that the objection of lack of novelty raised by the ISA cannot be considered as a clear case in the sense of G 1/89, since it is made under the allegation that the block copolymers disclosed in the cited documents might also fulfil the requirements in terms of the parameters set out in Claim 1 of the application in suit, and since the Applicant has evidently had no opportunity to show e.g. by comparative tests, that a distinction did exist with the block copolymers disclosed in the cited documents in respect of the parameters used for their definition.

3.12 The Board further observes that the assessment of inventive step of the block copolymers of Claim 1 carried out by the ISA in its Invitation amounts to no more than the conclusion that they did not involve an inventive step having regard to the state of the art as illustrated by a mere and undefined listing of prior art documents. It is not even stated which prior art document was considered to be the closest prior art, which was the problem identified in the light of this prior art, let alone which were the considerations leading up to the given conclusion that the subject-matter of Claim 1 was obvious. The mere citation of a list of documents without any analysis of what was disclosed in these documents and the undifferentiated allegation that with regard to these documents there is

no inventive step cannot be considered as a fair treatment (see also W 0026/91, Reasons 3.4).

3.13 Consequently, the Invitation of the ISA in respect to the objection of lack of unity *a posteriori* must be considered to contravene the principles laid down by the Enlarged Board of Appeal in decision G 1/89, namely that the Applicants should be given a fair treatment when considering the requirement of unity of invention and that additional fees should be charged under Article 17(3)(a) PCT only in clear cases.

4. It follows from the above that there was no justification for charging additional search fees, either *a priori* or *a posteriori*.

Order

For these reasons it is decided that:

The refund of the two additional search fees and the protest fee is ordered.

The Registrar: The Chairman:

C. Eickhoff R. Young